

forms as mere modifications of some few, or even of one single species. Subjective as the idea connected with the term "species" may be, it must be adhered to objectively wherever differences (even the most minute ones) are *constantly* observed in certain groups of forms, whatever may be their size and degree of organization. The *Dactylopora* from the Wetterstein limestones is very remarkable. Had not the Neocomian age of this deposit been ascertained by stratigraphical facts, the occurrence of this species in it would have raised the question whether it should not rather be regarded as belonging to the deeper Triassic horizons.

Pa-la Waw.

Near this village I noticed for the first time the "pa-la," or "white-wax insect," which produces the famous so-called vegetable wax of Sz-chuan. The branches of the smaller trees and shrubs along the road for a great distance appeared to be covered with snow, from the quantities of these insects, resembling small moths, of a delicate white colour, with a fluffy tail curling over the back.

The cultivation of wax is a source of great wealth to the province of Sz-chuan, and ranks in importance second only to that of silk. Its production is not attended with much labour or risk to the cultivator. The eggs of the insect which produces the wax are annually imported from the districts of Ho-chin or Ho-king, and Why-li-tzow, in Yunnan (where the culture of eggs forms a special occupation) by merchants who deal in nothing else but "Pa-la-tan" (white-wax eggs). The egg-clusters, which were described to me as about the size of a pea, are transported carefully packed in baskets of the leaves of the "Pa-la-shu" (white-wax tree), which resembles a privet shrub, and arrive in Sz-chuan in March, where they are purchased at about twenty taels per basket. The trees by the middle of March have thrown out a number of long tender shoots and leaves; and then the clusters of eggs, enclosed in balls of the young leaves, are suspended to the shoots by strings. About the end of the month the larvæ make their appearance, feed on the branches and leaves, and soon attain the size of a small caterpillar or, rather, a wingless house-fly, apparently covered with white down, and with a delicate plume-like appendage curving from the tail over the back. So numerous are they, that, as seen by me in Yunnan, the branches of the trees are whitened by them, and appear as if covered with feathery snow. The grub proceeds in July to take the chrysalis form, burying itself in a white wax secretion, just as a silkworm wraps itself in its cocoon of silk. All the branches of the trees are thus completely coated with wax an inch thick, and in the beginning of August are lopped off close to the trunk, and cut into small lengths, which are tied up in bundles and taken to the boiling-houses, where they are transferred, without further preparation, to large cauldrons of water, and boiled until every particle of the waxy substance rises to the surface; the wax is

then skimmed off and run into moulds, in which shape it is exported to all parts of the empire.

It would seem that the wax-growers find that it does not pay them to reserve any of the insects for their reproductive state—and hence the necessity of importing eggs from Yunnan. In the districts of Ho-chin and Why-li-tzow, where the culture of the eggs is alone attended to, both frost and snow are experienced; so that it would not be difficult to rear the insect in Europe; and, considering its prolific nature, the production of white wax might repay the trouble of acclimatizing this curious insect.—*Cooper's 'Pioneer of Commerce,'* pp. 323, 420.

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Chinese Freshwater Crabs and Hairy Tortoises.
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We brought up alongside a boat laden with immense quantities of crabs for Chung Ching. The crabs, taken in the lakes in spring and autumn, are sent to Sz-chuan, where they are considered a great delicacy. The boats in which they are carried are fitted up with tiers of basins, holding about a pint and a half of water each; and every crab has a separate basin, which is carefully refilled every day with fresh water, and the crabs are fed on raw minced meat. Cared for in this way, they make the voyage of forty or fifty days to Sz-chuan, during which not more than one in a hundred die. In the lake-country these crabs are bought for about three chen each.

Besides crabs, there were a number of a species of small water-tortoises, which the Chinese call hairy tortoises. These curious little animals were about two inches long, and covered on the back with a long confervoid growth, resembling green hair. The tortoise being a sacred emblem in China, the Chinese make pets of the hairy tortoise, which they keep in basins of water during the summer months, and bury in sand during winter. A small lake in the province of Kiang-see is famous for these so-called hairy tortoises; and many persons earn a livelihood by the sale of these curious little pets.

The day after leaving Sha-su, I was enabled to get up and take the fresh air on the deck of our boat: we were already in the lakes, which were unusually full of water; and on every lake busy fleets of small boats were at work, procuring loads of weeds which grow during the summer. The crews employed long double rakes, working like a pair of tongs, for gathering the weeds, which are used in the surrounding country for manure.—*Cooper's 'Pioneer of Commerce,'* p. 424.

E. CLAPARÈDE.

We regret to have to announce the death of this celebrated naturalist, which took place at Sienna, on the 31st ult. The cause of his death was a disease of the heart, from which he had long suffered acutely. His age was only 39.